Glencoe/McGraw-Hill

Precalculus: Functions and Graphs

This precalculus text includes a further focus on those skills considered prerequisite for calculus. Foundations of Calculus icons are included throughout identifying key examples and exercises needed to build this skill set. A review chapter summarizing these skills will round out the text. Objective Based Learning: Introductory section objectives have been expanded to include the "what and why" of the objectives, followed by icons within the text identifying the specific areas of focus. A summary of chapter objectives will now be featured in the chapter summary material. Mathematical Modeling and Data Analysis: A focus on mathematical modeling and data analysis, specifically establishing a step by step process for understanding word problems and gathering the data from said problems.

Research and Readibilities not available for Higher Ed (AP) Titles.

Teacher Edition		
0073315621 Precalculus :Functions and Graphs		$117.50
Essential Items		
Ancillary Items		
Free with Purchase items		
0072917709 Free Per Teacher	Student Solutions Manual	$48.00
0073304220 Free Per Teacher	Instructor Solutions Manual	$85.50
0073304239 Free Per Teacher	instructor Testing & Resource CD	$21.00
007305271x Free Per Teacher	Video Lecture Series DVD	$52.75

ISBN
0073312630

Contract Price
$117.50

Grade
9,10,11,12

TYPE
P1

Copyright
2008

Author
Barnett, et al

Edition
6

Content
Honors, AP Pre-Calculus

Readability
N/A

Accessibility
Nimas

Research

Provided by the Publisher

ISBN 0073312630	Publisher - **Glencoe/McGraw-Hill**		
Precalculus: Functions and Graphs			
Type - P1	Author - Barnett, et al		
Copyright - 2008	Edition - 6	Readability - N/A	
Course - Honors, AP Pre-Calculus		Grade(s) - 9,10,11,12	
Teacher Edition ISBN if applicable 0073315621			

Provided by the Publisher

Overall Recommendation: **Recommended as BASAL**

if this box is not checked, the evaluators have chosen NOT recommend as basal

Overall Strengths, Weaknesses, Comments:

The text is fundamentally sound and typical of traditional precalculus books.

NIMAC Accessibility	N
Ancillary	No
Free with Purchase	Yes
Research	No

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CRITERIA

This basal resource …

A. Encompasses KY Content Standards & Grade Level Expectations **Strong Evidence**

Text is designed to be used in an elective course outside the Program of Studies

1) Includes the 5 Big Ideas of mathematics to the following extent:	
a) Number Properties and Operations	Strong Evidence
b) Measurement	Little or No Evidence
c) Geometry	Little or No Evidence
d) Data Analysis and Probability	Little or No Evidence
e) Algebraic Thinking	Strong Evidence
2) Addresses content-specific enduring understandings from the related Program of Studies standards.	Strong Evidence

3) Addresses content-specific skills and concepts from the related Program of Studies standards.	Strong Evidence
4) Content addressed is current, relevant and non-trivial	Moderate Evidence
5) Provides opportunities for critical thinking/reasoning	Strong Evidence

6) Strengths, Weaknesses, Comments:

- Specific strengths-which areas/concepts are covered exceptionally well?
- Specific weaknesses-which areas/concepts would likely require supplementing?

Click here to enter text.

B. Functionality & Suitability — Moderate Evidence

1) Suitability — **Strong Evidence**

- Should be suitable for use with a diverse population and is free of bias regarding race, age, ethnicity, gender, religion, social and/or geographic environment; is free of stereotyping or bias of any kind.

2) Content quality — **Strong Evidence**

- Free from factual errors
- Content is presented conceptually when possible—more than a mere collection of facts
- Content included accurately represents the knowledge base of the discipline
- Theories/scientific models contained represent a broad consensus of the scientific community
- Interconnections among mathematical topics

3) Connections to Literacy — **Little or No Evidence**

- Employs a variety of reading levels and is grade/level appropriate
- Use of multiple representations-concrete, visual/spatial, graphs, charts, etc.
- Provides opportunities for summarizing, reviewing, and reinforcing vocabulary skills and concepts at multiple levels of difficulty for a variety of learning styles.
- Student text provides opportunity to integrate reading and writing
- Uses vocabulary that is age and content appropriate
- Focuses on critical vocabulary vs. extensive lists
- Identifies key vocabulary through definitions in both text and glossary
- The text is engaging and facilitates learning
- Embedded activities enhance the understanding of the text
  Note: may apply to either student or teacher editions

4) Connections to Technology — **Little or No Evidence**

- Integrates technology and reflects the impact of technological advances
- Uses technology in the collection and/or manipulation of authentic data
- Embeds web links as a mathematics resource.

5) Support for Diverse Learners — **Little or No Evidence**

- Provides support for ESL students
- Provides support for differentiation of instruction in diverse classrooms
- Challenge for gifted and talented students
- Support for students with learning difficulties
  Note: may apply to either student or teacher editions

6) Strengths, Weaknesses, Comments:

- Reviewers may provide page numbers to point out specific strong examples for individual evaluation standards.

Lack of evidence of reading and writing strategies and no opportunity for students to work with vocabulary. Technology is limited the the use of a graphing calculator. No support is given for diverse learners of any kind.

C. Supports Inquiry and Skill Development — Strong Evidence

1) Promotes Inquiry, research and Application of Learning — Strong Evidence

- Provides opportunities for inquiry and research that includes activities such as gathering information, researching resources, observing, interviewing, and evaluating information, analyzing and synthesizing data and communicating findings and conclusions, formulating authentic questions to deepen and extend mathematical reasoning.
- Requires students to use higher-level cognitive skills (analysis, synthesis, evaluation, generalizing, justifying, etc.)
- Provides activities and projects for students to deepen their knowledge and cultivate and strengthen problem-solving and decision-making skills.
- Provides opportunities for application of learned concepts.
- Uses a variety of relevant charts, graphs, diagrams, number lines, and other illustrations to invite and motivate students to engage in discussion, problem solving, and other high-order thinking skills.
- Emphasizes conceptual understandings that invite students to predict, conclude, evaluate, develop and extend ideas to support reasoning.
  Note: may apply to either teacher or student edition

2) Skill Development — Strong Evidence

- Provides opportunities to make sense of all mathematics
- Provides opportunities to recognize, create, and extend patterns.
- Provides opportunities for critical thinking and reasoning.
- Provides opportunities to justify/prove responses.
- Provides opportunities to ask deeper questions.
- Contains embedded activities (or extensions) that emphasize use of technology for problem solving
  Note: may apply to either teacher or student edition

3) Strengths, Weaknesses, Comments:

There is an absence of opportunities for inquiry and research.

D. Supports Best Practices of Teaching and Learning — Moderate Evidence

1) Engages Students

Moderate Evidence

- Includes content geared to the needs, interests, and abilities of all students
- Engages and motivates students using components such as real-life situations, simulations, experiments, and data gathering.
- Includes information and activities that assist students in seeing relevance of concepts (where appropriate) to their own lives and experiences
- Provides a variety of strategies, activities, and materials to enhance student learning at the appropriate learning levels
- Activities are truly congruent to the concepts addressed, not merely correlated
  Note: may apply to either teacher or student edition

2) Uses Assessment to Inform Instruction

Little or No Evidence

- Includes multiple means of assessment as an integral part of instruction
- Provides evaluation measures in the teacher edition that supports differentiated learning activities
- Embedded assessments reflect a variety of Depth of Knowledge levels
  Note: may apply to either teacher or student edition

3) Strengths, Weaknesses, Comments:

- Reviewers may provide page numbers to point out specific strong examples for individual evaluation standards

Though problems sets and group activities allow for a variety of DOK levels, variety of instructional methods for differentiated learning is not present.

E. Has an Organization/ Format that Supports Learning and Teaching — Moderate Evidence

1) Organizational Quality

Moderate Evidence

- Print and/or electronic materials present minimal barriers to learners, but also add encouragement for students to stretch and make further explorations.
- Presents chapters/lessons in an organized and logical sequence
- Provides clearly stated objectives for each lesson.
- Uses text features (e.g., titles, headings, subheadings, review questions, goals, objectives, space, print, type size, color) to enhance readability.
- Makes use of various forms of media (e.g., CD's, recordings, videos, cassette tapes, computer software, web-based components, interactive software, calculators, physical and virtual manipulatives) as either student or teacher resources
- Includes clear, accurate, appropriate and clearly explained illustrations and/or graphics that reinforce content standards.
- Incorporates a glossary, footnotes, recordings, pictures, and/or tests that aid pupils and teachers in using the book effectively
- Uses grade-appropriate type size
- Included media are durable, easy to use and have technical merit
- Construction appears to be durable and able to withstand normal use

2) Essential Components (beyond student and teacher text) Little or No Evidence

- Items identified as essential components support the learning goals and concept coverage of the basal

3) Strengths, Weaknesses, Comments:

- Reviewers may provide page numbers to point out specific strong examples for individual evaluation standards.

There are no essential components to the text. Organization is weakened by the lack of media represented, text glossary, and the opportunity for students to make further explorations.

F. Has available Ancillary/ Gratis Materials

Note: The decision whether to recommend or not recommend this resource as a basal should not be influenced by Section F

Moderate Evidence

1) Ancillary/Gratis Materials

- Coordinates teacher resources easily with student material (e.g., accompaniments included, student pages shown, instructional technology indicated).
- Are well-organized and easy to use
- Provide substantive learning opportunities and are congruent with student learning goals
- Provide opportunities for high-level thinking, assessment, and/or problem solving
- Provides opportunities for intervention.

2) Strengths, Weaknesses, Comments:

- Reviewers may provide page numbers to point out specific strong examples for individual evaluation standards.

Free with purchase materials are teacher materials only.